

Claims:

I claim:

1. A head for a shoring device comprising,
 - (a) a head base supporting one or more rollers, the rollers adapted to support a form while moving the form into or out of a position over the shoring device;
 - (b) a supporting plate for supporting the form when it is in the position;
 - (c) a vertically slidable connection between the supporting plate and the head base,

wherein the supporting plate may be slid upwards and fixed in a position where the top of the supporting plate is above the top of the rollers or slid downwards so that the top of the supporting plate is below the top of the rollers.
2. The head of claim 1 wherein the vertically slidable connection includes,
 - (a) a supporting plate element extending downwards from the supporting plate;
 - (b) a head base element extending upwards from the head base; and,
 - (c) a tapered member,

wherein the supporting plate element and head base element are each provided with one or more holes which can be aligned horizontally to accept a wider portion of the tapered member and wherein the variation in size of the of the tapered member from the wider portion to a narrower portion is sufficient to cause the top of the supporting plate to move between positions above and below the top of the rollers when the tapered member is moved horizontally into or out of the holes.
3. The head of claim 2 herein the supporting plate element and head base element have horizontal cross-sectional shapes that may slide vertically one within the other, but which inhibit rotation of one relative to the other in a vertical plane or inhibit movement of one horizontally relative to the other.

4. The head of claim 2 wherein the inner horizontally dimensions of a vertically extending cavity horizontal of one element are slightly larger than the outer dimensions of a horizontal cross-section of other element.
5. The head of claim 4 wherein the shape of the vertically extending cavity and the horizontal cross-section of the other element are both rectangular or such that one will not rotate within the other.
6. A head according to claim 1 having an alignment tool for aligning the angular position of the rollers in a horizontal plane with an external reference.
7. The head of claim 6 wherein the external reference is any one of a column, wall, jig or sight line between columns or walls.
8. The head of claim 1 having guides mounted to the head so as to provide bearing surfaces above and on opposed sides of an upper surface of the supporting plate, the horizontal distance between the guides being sufficient to admit a portion of the form.
9. A shoring apparatus comprising,
 - (a) a support for attaching the shoring bracket to a column or other supporting surface of a structure being constructed;
 - (b) a jack attached to the support and having a portion with variable height relative to the support; and,
 - (c) a head according to claim 1 attached to the portion of the jack with variable height.
10. The shoring apparatus of claim 9 having an alignment tool or bracket for aligning the angular position of the rollers in a horizontal plane with an external reference.

11. The shoring apparatus of claim 10 wherein the external reference is any one of a column, wall, jig or sight line between columns or walls.

12. The shoring apparatus of claim 9 wherein the jack may be prevented from rotating, the head is fixable but rotatable in a horizontal plane relative to the jack and having an alignment tool or bracket communicating with the head for aligning the angular position of the rollers in a horizontal plane with an external reference.

13. The shoring apparatus of claim 9 wherein the attachment between the head and the jack is pivotable.

14. The shoring apparatus of claim 9 wherein the attachment between the head and the jack is pivotable about an axis parallel with or perpendicular to the one or more rollers.

15. The shoring apparatus of claim 9 wherein the jack is a screw jack with a screw jack shaft slidable within a bore and screw jack nuts on opposed sides of the bore.

16. A shoring apparatus comprising,

A) a plurality of shoring brackets mountable in opposed sets, each set attached to opposed lines of columns or other supporting surfaces and each having,

- (a) a support for attaching the shoring bracket to a column or other supporting surface;
- (b) a jack attached to the support, the jack having a portion with variable height relative to the support;
- (c) a head attached to the portion of the jack with variable height and having a supporting plate for supporting objects above the head; and,

B) one or more forms, supports for forms or spanning structures that can be made or assembled in a set of widths within a range that differ from each other by a selected increment, and having members which rest on the supporting plate of the head,

wherein the jack may be attached to the support in at least two positions, the two positions being spaced horizontally in the direction between the opposed sets of shoring brackets by one half of the increment,

and wherein the supporting plates of the head are wider than the members which rest on the supporting plate by at least one half of the increment horizontally in the direction between the opposed sets of shoring brackets.

17. The shoring apparatus of claim 14 with a head according to claim 1.

18. The shoring apparatus of claim 17 wherein the attachment between the head and the jack is pivotable.

19. The shoring apparatus of claim 18 wherein the attachment between the head and the jack is pivotable about an axis parallel with or perpendicular to the one or more rollers.

20. A truss for spanning between an opposed pair of supports in a shoring system, the truss having at least one adjustable member with an adjustable length, wherein adjusting the length of the adjustable member causes the truss to become pre-cambered.

21. A truss for spanning between supports in a shoring system comprising,

a) one or more truss members forming a generally horizontal cord having a middle and a pair of opposed ends; and,

b) a pair of diagonal members having first and second ends,
wherein,

- c) the adjustable member is oriented generally vertically and has an upper end and a lower end;
- d) the upper end of the adjustable member is connected to the middle of the horizontal cord of the truss;
- e) the lower end of the adjustable member is connected to a first end of each of the diagonal members; and,
- f) the second ends of the diagonal members are connected one to each of the ends of the horizontal cord.

22. The truss of claim 21 further comprising,
- a) one or more truss members forming a second generally horizontal cord generally parallel to and above the generally horizontal cord; and,
 - b) a plurality of struts between the generally horizontal cord and the second generally horizontal cord.

23. A truss for spanning between an opposed pair of supports in a shoring system, the truss comprising,
- a) a first truss section having first section upper and lower generally horizontal cords separated by first section struts;
 - b) a second truss section having second section upper and lower generally horizontal cords separated by second section struts,
 - wherein the second section upper and lower cords can be attached to first ends of the first section upper and lower cords in a plurality of locations such that the truss may be assembled in a plurality of widths.

24. The truss of claim 23 further comprising a third truss section having third section upper and lower generally horizontal cords separated by third section struts,
 - wherein the third section upper and lower cords can be attached to second ends of the first section upper and lower cords in a plurality of locations such that the truss may be assembled in a plurality of widths.

25. The truss of claim 23 having at least one adjustable member with an adjustable length, wherein adjusting the length of the adjustable member causes the truss to become pre-cambered.
26. The truss of claim 23 wherein the truss further comprises,
 - a) a pair of diagonal members having first and second ends, wherein,
 - b) the adjustable member is oriented generally vertically and has an upper end and a lower end;
 - c) the upper end of the adjustable member is connected to the middle of the lower cord of the truss;
 - d) the lower end of the adjustable member is connected to the first end of each of the diagonal members; and,
 - e) the second ends of the diagonal members are connected one to each of the distal ends of the truss sections.
27. The truss of claim 23 having pairs of cords, each pair of cords comprising a cord of the first truss section and an adjacent cord of the second truss section, wherein the pairs of cords are slidable along the longitudinal axes of the cords within and with respect to each other.
28. The truss of claim 27 wherein the cords of each pair of cords have a plurality of engaging surfaces for engaging each other.
29. The truss of claim 27 wherein the cords of each pair of cords have strut attaching surfaces for bolting struts to the cords and the engaging surfaces maintain a separation between the strut attaching surfaces of the pairs of cords at least as large as the sum of the thickness of the heads of bolts used to bolt struts to the cords, such that the pairs of cords may slide relative to each other without the heads of the bolts associated with either of the first or second truss section contacting the heads of the bolts associated with the other truss section.

30. The truss of claim 29 wherein the cords of each pair of cords are generally in the shape of C-channels oriented such that the flanges of the cord of one of the pair extend to the left and the flanges of the other cord extend to the right of the web and the webs provide the strut attaching surfaces.

31. The truss of claim 23 wherein the cords of at least one of the cords of the first truss section or the second truss section are provided with one or more lines of holes, the holes being spaced horizontally in each line of holes by a selected increment and wherein at least one matching hole is provided in the other truss section, such that the truss sections may be bolted together to provide a plurality of spans differing by the selected increment.

32. The truss of claim 28 wherein the cords are shaped such that the cords may be initially put together in a rough alignment but bolting the pair of cords are bolted together draws them into a more nearly co-linear alignment.

33. The shoring apparatus of claim 16 wherein the forms, supports for forms or spanning structures comprise trusses according to claim 23.

34. A shoring device comprising,

(a) a head base;

(b) a supporting plate adapted to support a form or other structure to be shored;

(c) a first lifting mechanism for alternately lifting or lowering the supporting plate relative to the head base;

(d) a support for attaching the shoring device to a supporting surface; and,

(e) a second lifting mechanism for alternately lifting or lowering the head base relative to the support.